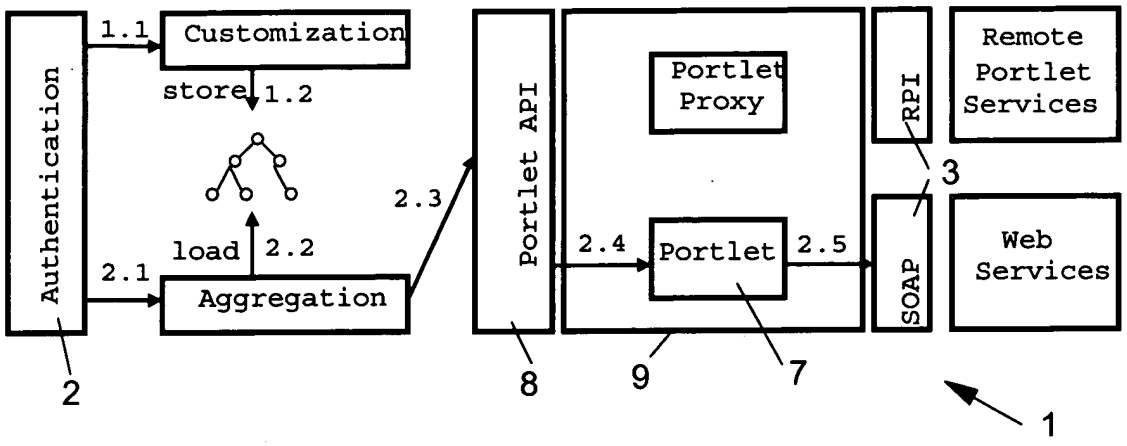
Authentication
1.1
Customization
store
1.2
load
2.2
2.1
Aggregation
2.3
Portlet API
Portlet Proxy
2.4
Portlet
2.5
RPI
SOAP
3
Remote Portlet Services
Web Services
2
8
9
7
1

FIG. 1

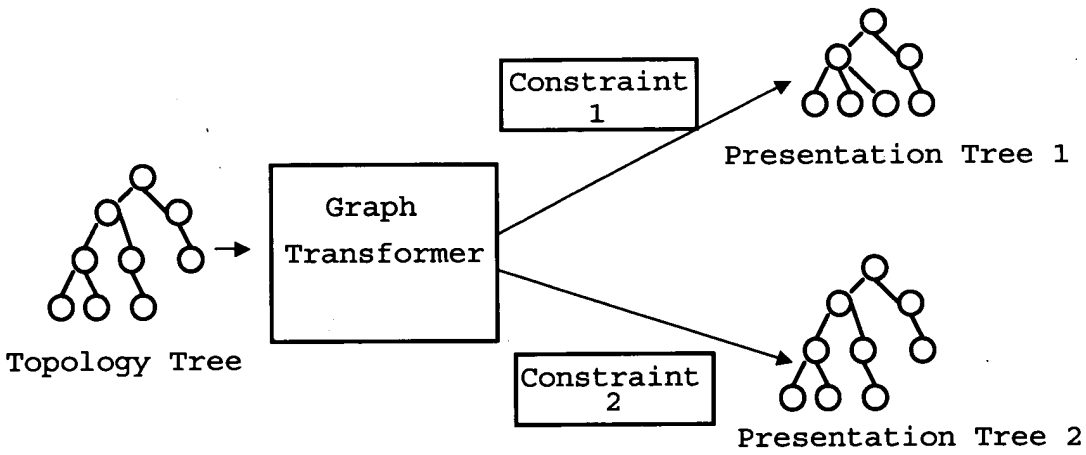
Constraint 1
Presentation Tree 1
Graph Transformer
Topology Tree
Constraint 2
Presentation Tree 2

FIG. 2A

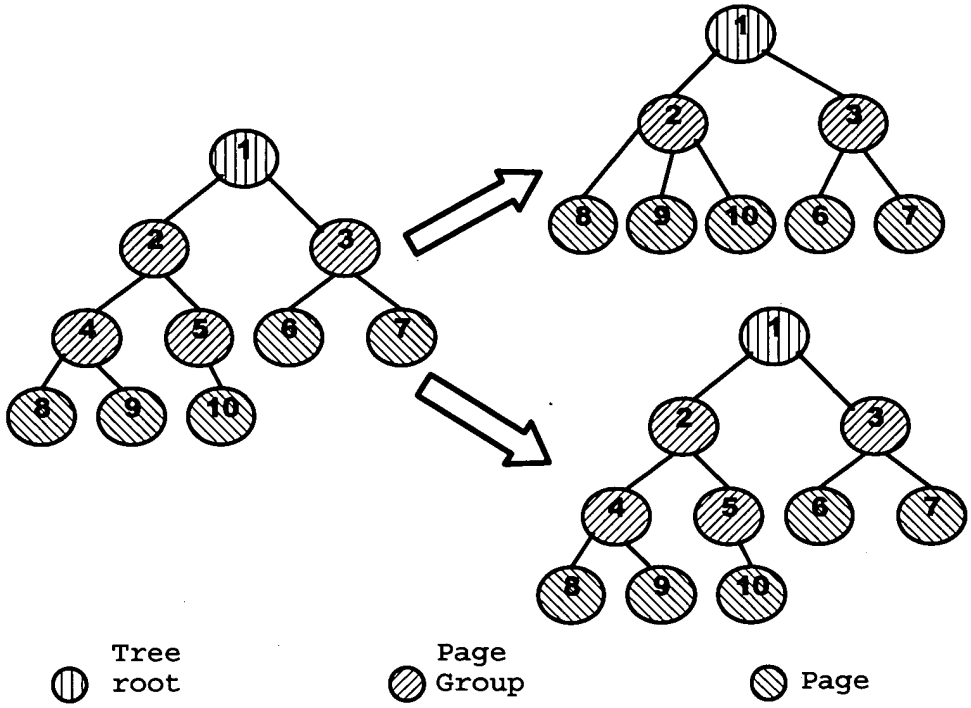


FIG. 2B

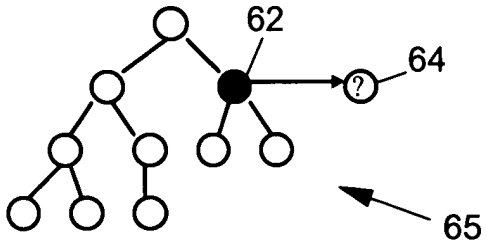


FIG. 3A

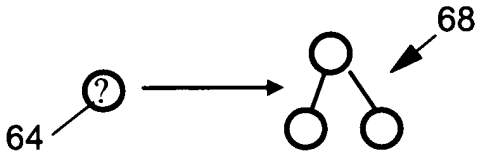


FIG. 3B

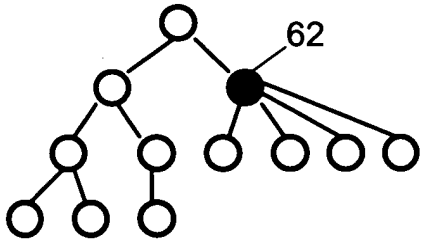


FIG. 3C

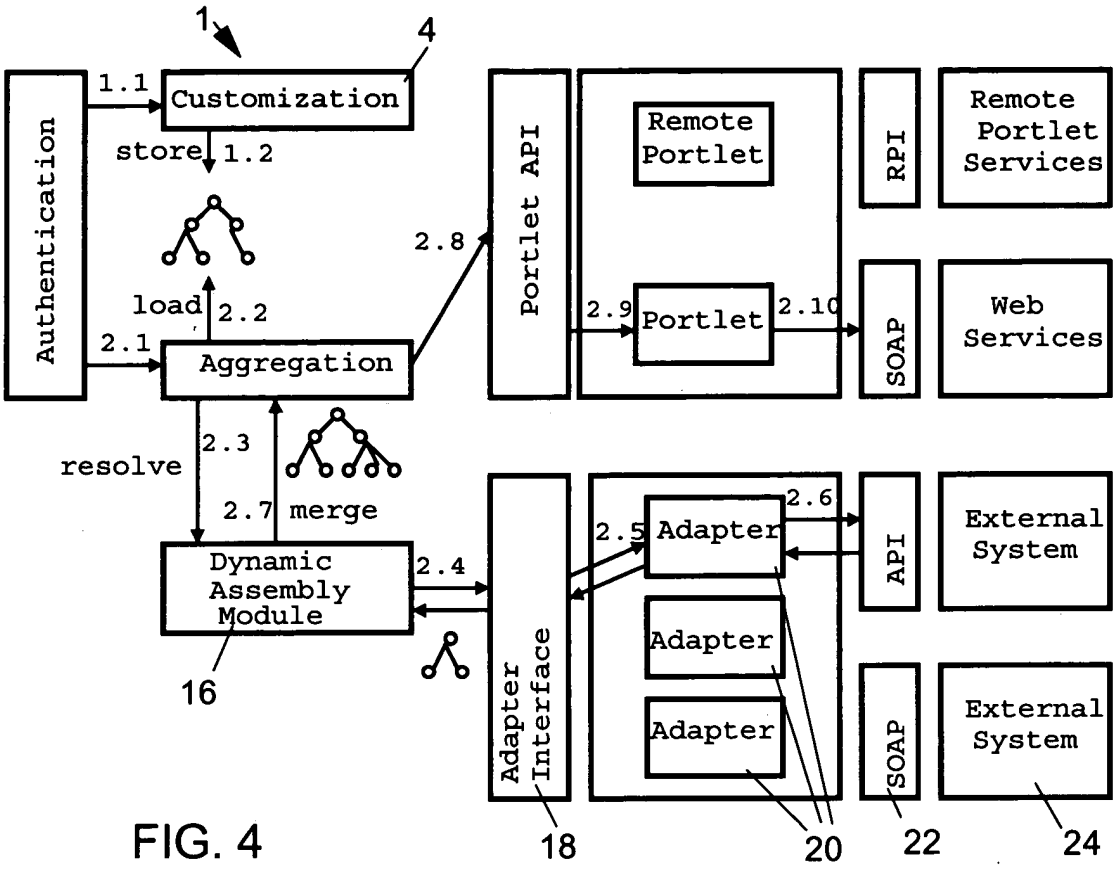


FIG. 4

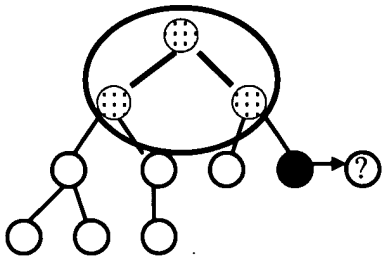

FIG. 5A

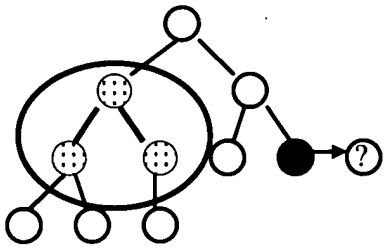

FIG. 5B

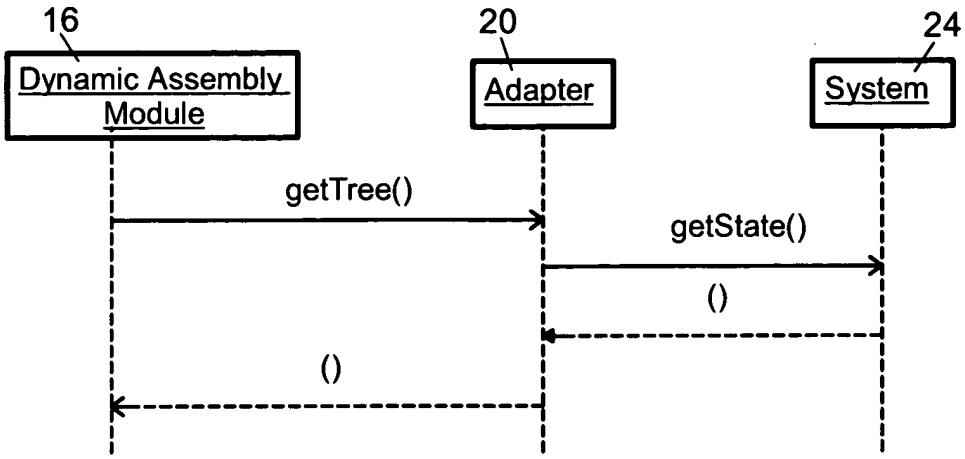


FIG. 5C

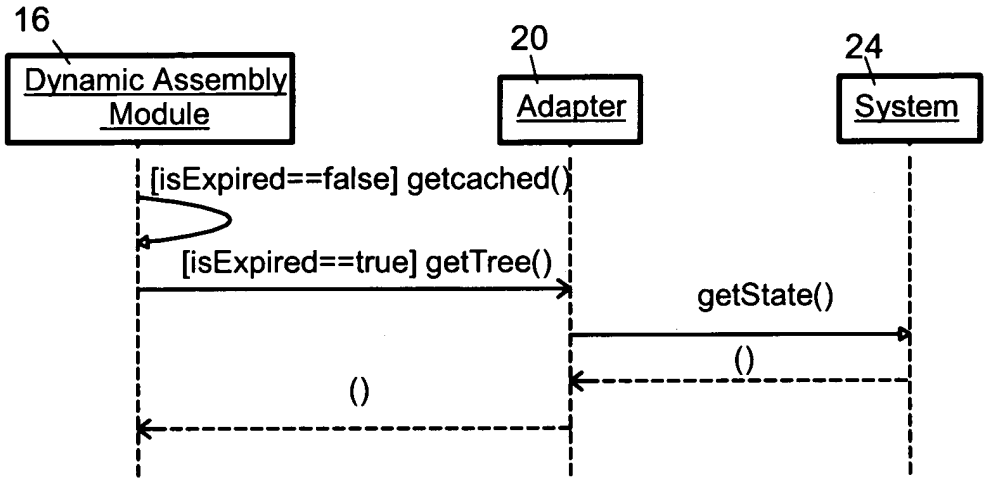


FIG. 5D

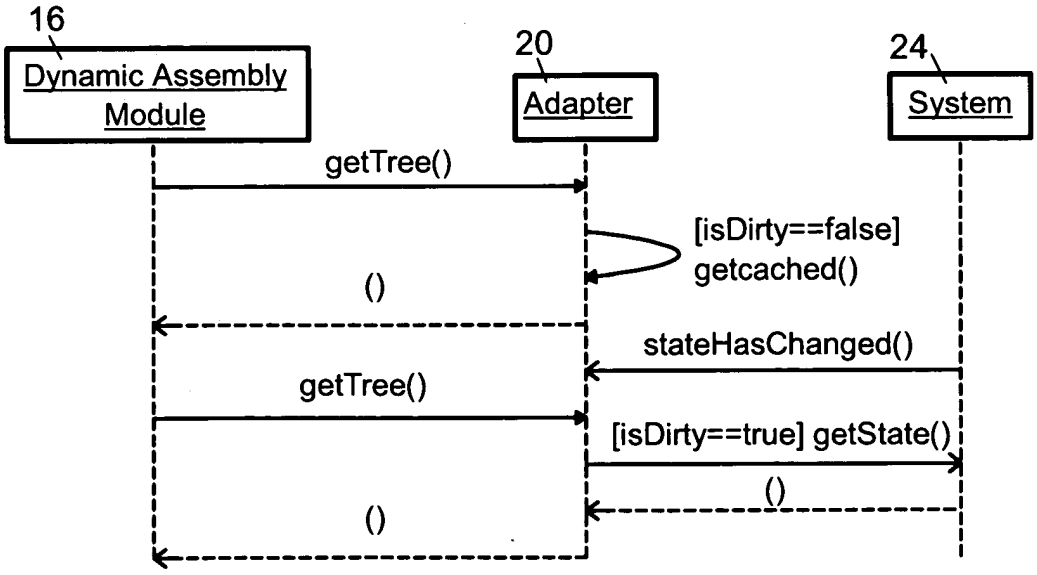


FIG. 5E

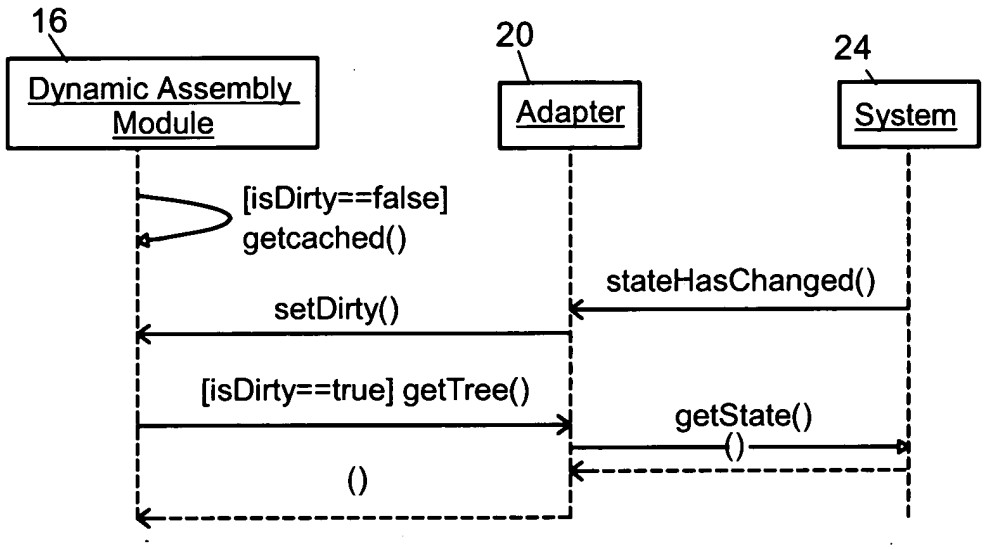
16
Dynamic Assembly Module
20
Adapter
24
System
[isDirty==false] getcached()
stateHasChanged()
setDirty()
[isDirty==true] getTree()
getState()
()
()

FIG. 5F

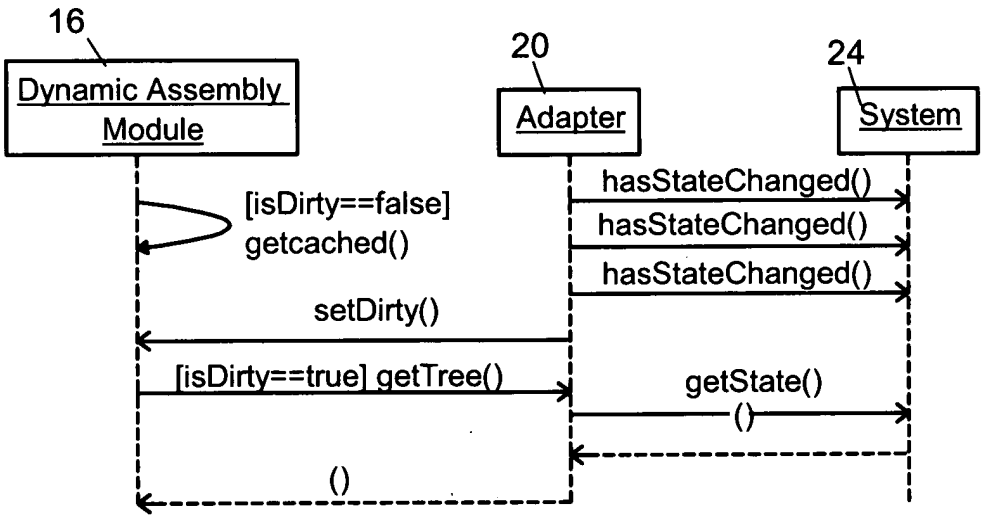
16
Dynamic Assembly Module
20
Adapter
24
System
hasStateChanged()
hasStateChanged()
hasStateChanged()
[isDirty==false] getcached()
setDirty()
[isDirty==true] getTree()
getState()
()
()

FIG. 5G

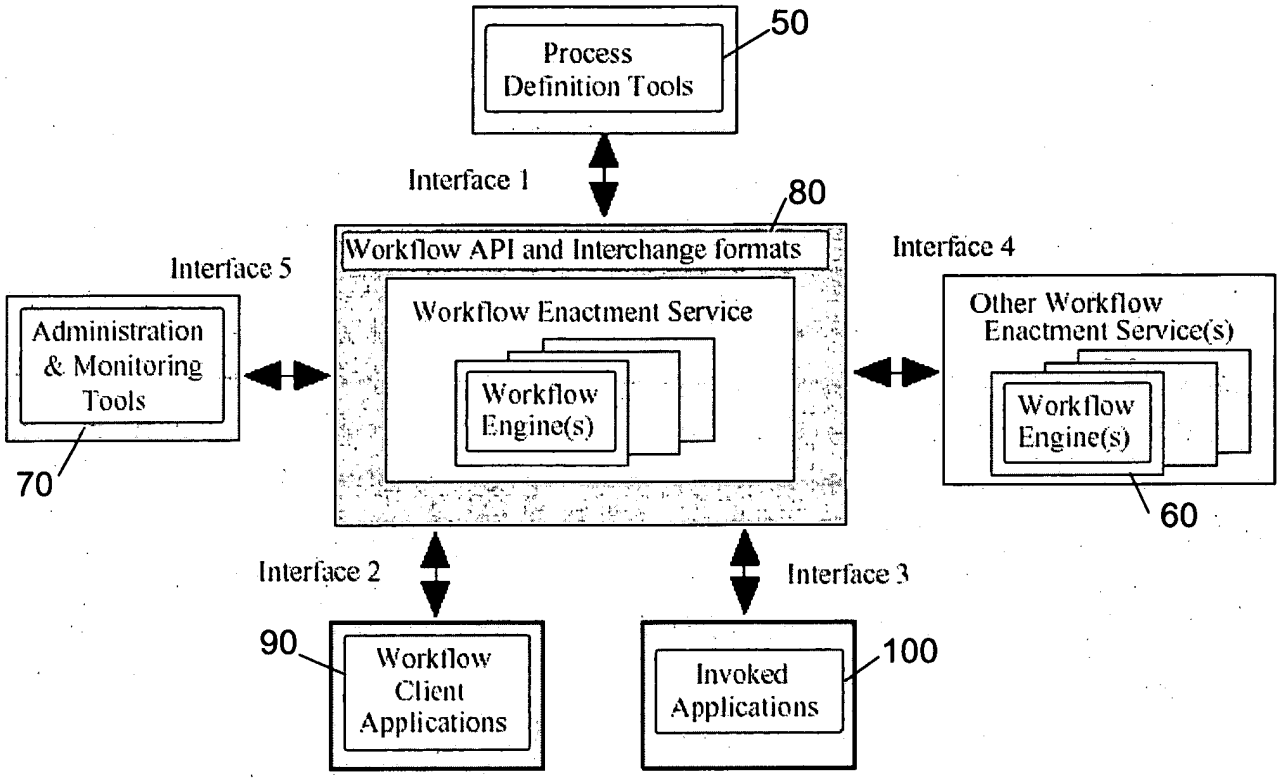
Process Definition Tools
50
Interface 1
80
Workflow API and Interchange formats
Interface 5
Interface 4
Workflow Enactment Service
Administration & Monitoring Tools
Other Workflow Enactment Service(s)
Workflow Engine(s)
Workflow Engine(s)
70
60
Interface 2
Interface 3
90
Workflow Client Applications
Invoked Applications
100

FIG. 6

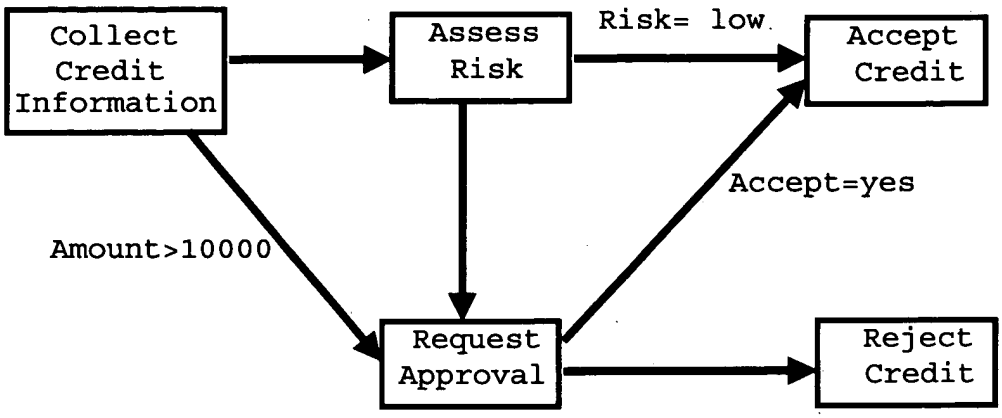
Collect Credit Information
Assess Risk
Risk= low
Accept Credit
Accept=yes
Amount>10000
Request Approval
Reject Credit

FIG. 7

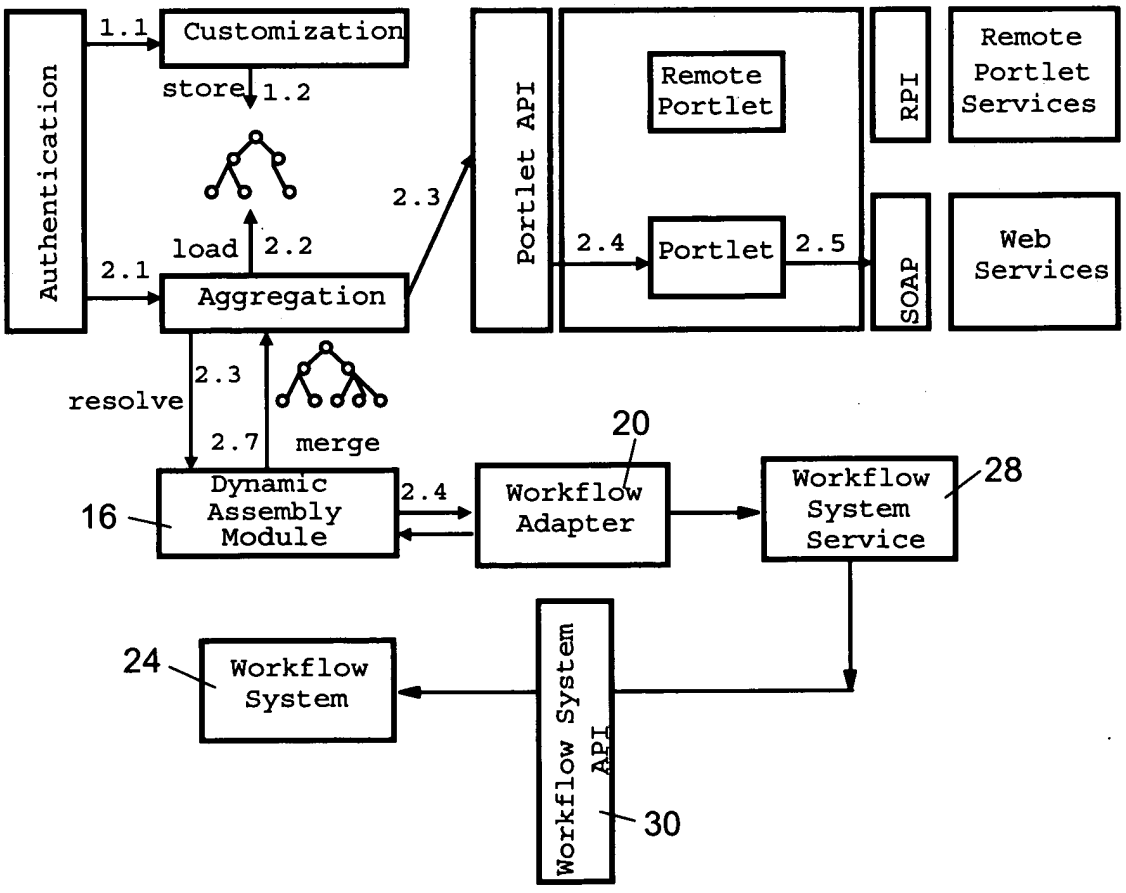
Authentication
1.1
Customization
store
1.2
load
2.2
2.1
Aggregation
2.3
Portlet API
Remote Portlet
2.4
Portlet
2.5
RPI
Remote Portlet Services
SOAP
Web Services
resolve
2.3
2.7
merge
20
16
Dynamic Assembly Module
2.4
Workflow Adapter
Workflow System Service
28
24
Workflow System
Workflow System API
30

FIG. 8

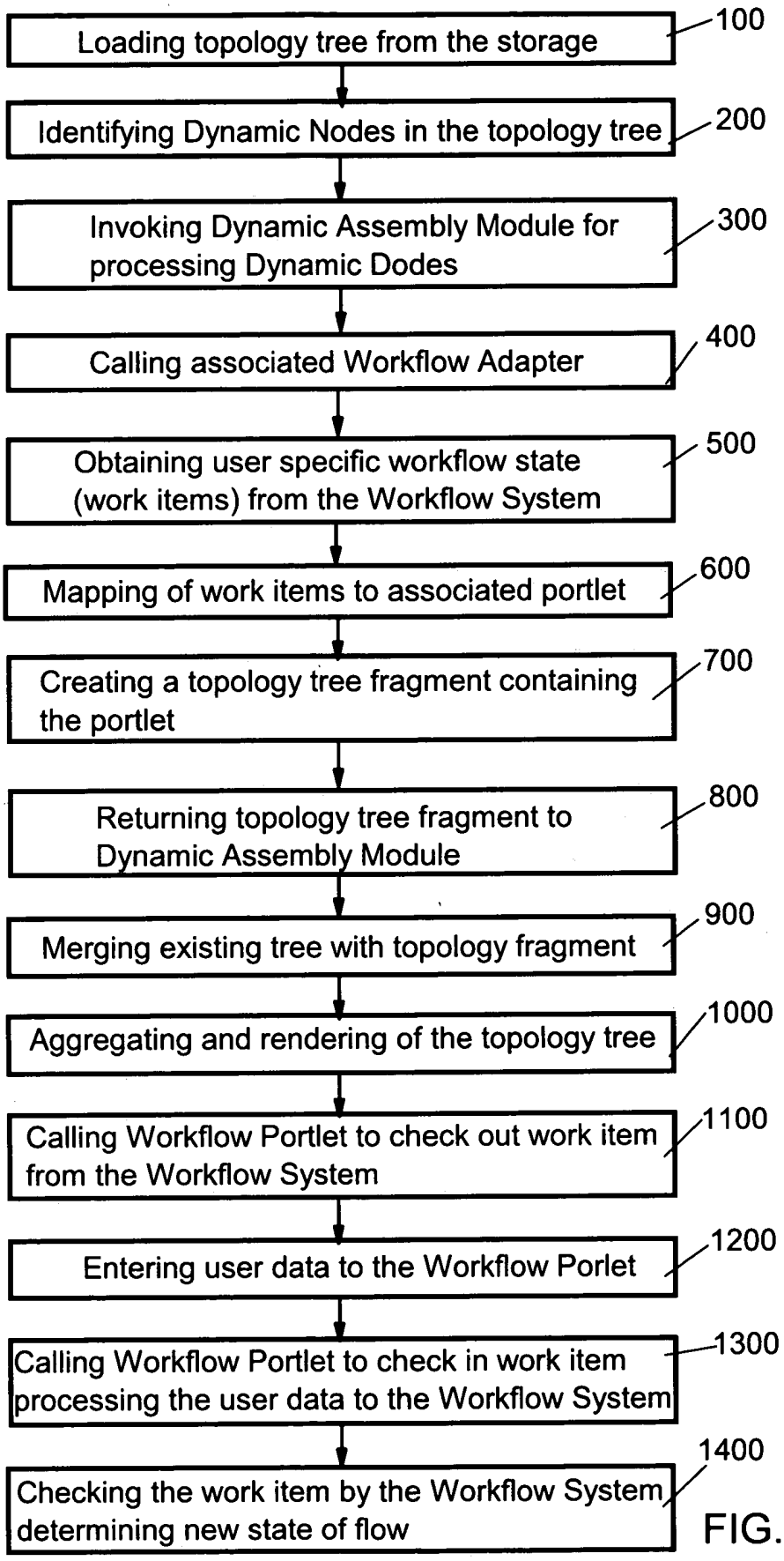
Loading topology tree from the storage
100
Identifying Dynamic Nodes in the topology tree
200
Invoking Dynamic Assembly Module for processing Dynamic Dodes
300
Calling associated Workflow Adapter
400
Obtaining user specific workflow state (work items) from the Workflow System
500
Mapping of work items to associated portlet
600
Creating a topology tree fragment containing the portlet
700
Returning topology tree fragment to Dynamic Assembly Module
800
Merging existing tree with topology fragment
900
Aggregating and rendering of the topology tree
1000
Calling Workflow Portlet to check out work item from the Workflow System
1100
Entering user data to the Workflow Porlet
1200
Calling Workflow Portlet to check in work item processing the user data to the Workflow System
1300
Checking the work item by the Workflow System determining new state of flow
1400

FIG. 9